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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/724,991	12/01/2003	Matthew Schall	CUNIF.00021	1875

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EXAMINER	
FLEISCHER, MARK A	

ART UNIT	PAPER NUMBER
4143	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/724,991	SCHALL, MATTHEW	
	Examiner	**Art Unit**	
	MARK A. FLEISCHER	4143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _01 December 2003_.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-16_ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-16_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _01 December 2003_ is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _24 Feb. 2004_.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Status of Claims

1. This action is in reply to the Application filed on 1 December 2003.
2. Claims 1-16 are currently pending and have been examined.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character “13” has been used, on page 7, line 9 to designate both a *scanner* and *electronic data*.
4. On page 7, line 14 reference sign 14 denotes a *client* whereas in Figure 1 it is labeled as a *server*.
5. On page 8, reference is made to step 24, but the reference label merely references a table in Figure 2.
6. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

7. The disclosure is objected to because of the following informalities:

   Page 5, line 11: The phrase *…have the weight…* seems incomplete as it does not explain what weight or how the weight is calculated or determined or even to what it

refers. Examiner believes this is merely a typographical error and should include the word 'same' as in *same weight*. In addition, the entire sentence is vague as to what contributes to the *pooled data set*.

Page 9, lines 5-7: This sentence appears incorrect and is unnecessarily misleading and confusing. The average of scale percent entries for a 10 point scale (e.g., for scores 10 and 7) equal the score percentage on a 7 point scale for a score of 6.

Page 9, line 15: The sentence beginning with *The only bias…* is very confusing where it states *the more unequal the numbers of twos and threes…*Does the Applicant mean the numbers of responses vary greatly for these scores? The text makes it difficult to ascertain.

Page 11, Table 3: The illustration denoted as *Table 3* is, in fact, not a table. It is a figure and must be properly included in the set of drawings. Also, the arrows indicating the 10-point scale and the 7-point scale do not clearly show which curves correspond to which scale.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 3, 4, 11 and 12 are rejected as they recite or refer to the limitation "*converting each received survey score to a primary mean score*" or the terms *primary mean score* and are without sufficient antecedent basis in the claims. These statements are not consistent with the specification and do not make mathematical sense. In the respective parent claims, there are limitations for converting scores to a *common response scale* that Examiner interprets as meaning that each received score is converted to a score percentage as described in the specification (see Application page 8, lines 17-8). Examiner believes this is a typographical error

and that for purposes of examination, the Examiner will interpret these limitations as meaning that each set of received scores is used to calculate a mean value as in an average score for each hotel and that resampling is performed on these percentage values.

Claim Rejections - 35 USC § 101

10. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

11. Claims 1-16 are rejected under 35 U.S.C. 101 because the claimed invention lacks patentable utility. Applicant claims in his summary that the invention *provides a mechanism by which different surveys conducted on different scales may be compared to each other on a common scale,* but any surveys may be 'compared'. The question arises as to whether there is a substantial and credible utility, in the claimed invention, that permits meaningful and useful comparisons. See MPEP §2107.02, VII. While Applicant provides a contrived illustration as to how the methods make distributions of scores and score means similar, there is no statement regarding whether or not such distributions would be sufficiently similar in the general case. While Applicant need not provide evidence sufficient to demonstrate utility in this matter to a "statistical certainty" (see *Nelson v. Bowler*, 626 F.2d 853, 856-57, 206 USPQ 881, 883-84 (CCPA 1980)), some evidence is required. Without this evidence, the application lacks substantial utility. In addition, the invention does not provide credible utility. The invention, as claimed, seeks to allow comparisons between 'apples' and 'oranges', in that linear transformations and the associated resampling methods and distributions may be generally applied. Applicant merely states that the invention applies to 'different surveys' or, as in claim 1, *disparate surveys*. Such general application, however, is not consonant with established principles in the art. Veenhoven, for example, on page 57, section 7.3 states that "Converting average scores on different questions on happiness is in fact estimating how respondents would have answered on a question that was not presented to them….Such estimates are no more than

guesses. One can never be sure how people in a country would have answered a question that was not posed to them." Emphasis added. In section 7.3.1 he further states that "…the indicators of overall happiness, hedonic level and contentment measure essentially different things. Hence scores on these indicators can *not* be transformed to one common standard." Applicant does not limit his claims to those scales that attempt to measure the same or similar variants. Consequently, the utility of the invention is lacking in credibility. Assuming *arguendo* that the claimed invention does limit the application of the invention to scales with the same or similar variants, then the Applicant must provide some evidence of utility to a more limited application of the novel features of the invention. Because the methods of linear transformations, as shown below, are obvious, the additional steps of standardizing the numbers of scores and resampling, and converting means to normally distributed values, must have some non-obvious and novel utility that allows for meaningful and useful comparisons of survey results. No credible statements of utility regarding these method steps are present, nor is there any evidence of such utility apparent from the specification. Consequently, the claimed invention lacks substantial and credible utility.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

13. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

a) Determining the scope and contents of the prior art.
b) Ascertaining the differences between the prior art and the claims at issue.
c) Resolving the level of ordinary skill in the pertinent art.
d) Considering objective evidence present in the application indicating obviousness or nonobviousness.

14. **Examiner's Note**: The Examiner has pointed out particular references contained in the prior art of record within the body of this action for the convenience of the Applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply. Applicant, in preparing the response, should consider fully the entire reference as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.
15. Claims 1 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Veenhoven.

Claims 1 and 9:

Veenhoven, as shown, discloses and/or describes the following limitations:

- *A method of converting and comparing disparate numerical survey scores comprising* (Veenhoven, on at least page 62, Section 7.3, paragraph 1 describes a survey score conversion technique: "Though comparison is better possible…we considered the possibilities for converting scores on different indicators to a common standard." Moreover, the section is entitled "CONVERTING AVERAGE SCORES ON NON-IDENTICAL ITEMS" where "Non-Identical" is equivalent to *disparate*. Emphasis added.)*:*

  - *receiving at least one survey score on a first response scale* (Veenhoven, on at least chapter 8 on page 66 is entitled "Use of This Data-Set" implies that the authors *receiv[ed]* data. Also, on page 54, Veenhoven describes databanks and archives from which data are received. Finally, on page 63 Veenhoven refers to two disparate response scales: "life-satisfaction that is either scored on a 0-10 scale or on a 1-10 scale.") *;*

- *receiving at least one survey score on a second response scale* (See the rejection analysis of the previous limitation)*; and,*

- *converting each received survey score to a common response scale* (Veenhoven, on page 61 states: “Linear transformation is more appropriate where the difference is only in the length of graphic rating-scales.” Here, *converting* equates to ‘transformation’.)

Veenhoven does not specifically disclose that the methods abiove are carried out on a computer. However, Veenhoven does disclose database capability. Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention to modify the techniques described in Veenhoven because employing such means would increase the efficiency of the surveying and analysis process of the claimed invention.

16. Claims 2 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Veenhoven as applied to claims 1 and 9 above, and further in view of Garson.

Claim 2 and 10:

Veenhoven describes and/or discloses the limitations in the rejection of claims 1 and 9. Although Veenhoven refers numerous times to “standardizing scores” (in at least page 51), Veenhoven does not explicitly refer to the method of standardizing *the number of responses*. Garson, however, as shown does. Applicant states that this standardization process pertains to *the number of responses* so as *[t]o mitigate* (see page 10, line 6) the influence or bias of different sizes of contributed scores. Applicant further states that the method *duplicate[es] each survey … by the resulting quotient number of times*. This, in effect, assigns more weight to those survey scores that come from hotels with fewer responses and less weight to those survey scores from hotels with more responses. Although Veenhoven also describes on at least page 63 various approaches to weighting responses, the particular technique of weighting various data points is a well-known

procedure for reducing bias in statistical analyses and is commonly referred to as *probability-proportional-to-size* sampling, a type of multi-stage sampling well-known in the statistical sampling arts. Garson, as shown, describes this same *standardizing* procedure in the following example: “The weight for any surveyed individual in the sample is then the number of people in that household divided by this average. For instance, if a given household had 5 eligible individuals, the weight for that case would be 5/2.5 = 2.” Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention to combine the teachings of Veenhoven with those of Garson to weight scores in the manner of the limitation, by compensating for their actual numbers, among sampled hotels in order to make the resulting evaluations more objective (unbiased) and hence useful for assessing the results of survey questionnaires.

17. Claims 3–6 and 11–14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Veenhoven as applied to claims 1 and 9 above.

Claim 3 and 11:

Veenhoven describes and/or discloses the limitations in the rejection of claims 1 and 9. Veenhoven does not explicitly disclose *converting each received survey score to a primary mean score*. However, Examiner takes **Official Notice** that it is old and well-known as well as commonplace in the survey sampling arts and statistical analysis arts to calculate mean values and related measures of central tendency. Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention to calculate mean values for a set of values and to utilize computer related means for doing so as the calculation of means provides a useful measure of central tendency that can be utilized in further statistical analysis to assess the relative scores among distinct clusters of scores (as in assessing the relative scores of distinct hotels).

Claims 4 and 12:

- Veenhoven describes and/or discloses the limitations in the rejection of claims 1 and 9. Veenhoven does not explicitly disclose *resampling each primary mean score to form a mean score distribution*. However, Examiner takes **Official Notice** that it is old and well-known as well as commonplace in the survey sampling arts and statistical analysis arts to use the method of resampling to obtain a distribution of values which in this case are percentage score values associated with a particular entity, *i.e.,* the *primary* cluster. Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention to utilize resampling methodology and so that the resulting statistical data can be utilized in further statistical analysis to assess the relative scores among distinct clusters of scores (as in assessing the relative scores of distinct hotels).

Claim 5 and 13:

- Veenhoven describes and/or discloses the limitations in the rejection of claims 4 and 11. Veenhoven does not explicitly disclose *providing statistical tests of differences between primary scores*. However, Examiner takes **Official Notice** that it is old and well-known as well as commonplace in the survey sampling arts and statistical analysis arts to provide statistical tests to determine whether there are any statistically significant differences between and among distinct sets of values. Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention to employ methods for providing statistical test to sets of values with the methods of Veenhoven as shown, as the calculation of test statistics can be utilized to assess the distribution of scores among distinct clusters of scores (as in assessing the distribution of scores of distinct hotels).

Claims 6 and 14:

- Veenhoven describes and/or discloses the limitations in the rejection of claims 4 and 12. Veenhoven does not explicitly disclose *mapping individual scores from the mean score distribution*. However, Examiner takes **Official Notice** that it is old and well-known as well as commonplace in the survey sampling arts and statistical analysis arts to rank a value associated with a particular entity in terms of an overall distribution. A common and well-known method is a percentile ranking which maps particular scores with respect to an overall distribution of scores. Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention to utilize a percentile mapping methodology so that the resulting percentile scores can be utilized to assess the relationships among distinct clusters of scores (as in assessing the relationships of distinct hotels) and increase the efficiency of the surveying and analysis process of the claimed invention.

18. Claims 7, 8, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Veenhoven as applied to claims 6 and 14 above, and further in view of Ross as shown.

Claims 7 and 15:

Veenhoven describes and/or discloses the limitations in the rejection of claims 6 and 14. Veenhoven does not specifically disclose the limitations below, But Ross, as shown, does:

- *the mapped scores are transmitted to at least one service provider* (Ross, on at least page 49 states: “Prepare report for customer(s).”).

Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention to combine the methods of Veenhoven with those of Ross so that the results of the statistical methods described in Veenhoven (and also Ross) can be communicated to those entities that request such information and thereby provide a valuable and economically worthwhile service to such service providers.

Claim 8 and 16:

Veenhoven describes and/or discloses the limitations in the rejection of claims 6 and 14. Veenhoven does not specifically disclose the limitations below, But Ross, as shown, does:

- *the mapped scores are utilized for assessing at least one service or product provider's performance* (Ross, on at least page 1 states: "A survey, then, is much more than the mere compiling of data. The data must be analyzed, <u>interpreted</u>, and <u>evaluated</u>." (emphasis added) where "interpreted" and "evaluated" correspond to *assessing*. Ross further states that this is for "customers" (see the rejection of claim 7) which corresponds to *service or product provider's performance.*)

Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention to combine the methods of Veenhoven with those of Ross so that the results of the statistical methods described in Veenhoven (and also Ross) can be communicated to those entities that request such information, utilized to assess their performance and thereby provide a valuable and economically worthwhile service to such service providers.

Conclusion

Any inquiry of a general nature or relating to the status of this application or concerning this communication or earlier communications from the Examiner should be directed to Dr. **Mark A. Fleischer** whose telephone number is **571.270.3925.** The Examiner can normally be reached on Monday-Friday, 9:30am-5:00pm. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, **James A. Reagan** whose telephone number is **571.272.6710** may be contacted.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://portal.uspto.gov/external/portal/pair <http://pair-direct.uspto.gov >. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at **866.217.9197** (toll-free).

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18 January 2008
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